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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hiroshi Ito

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EXAMINER

NILAND, PATRICK DENNIS

ART UNIT

PAPER NUMBER

1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,975	Applicant(s) ITO ET AL.	
	Examiner Patrick D. Niland	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/6/09 has been entered.

The amendment of 2/6/09 has been entered. Claims 1-10 and 12-19 are pending.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. There is not basis in the originally filed specification for the full scope of the newly presented claim 19. The examples do not support the full scope of the newly presented claim 19. The newly added scope is new matter. The claims are not limited to the scope of the instant specification pages 15-16 and 40 argued by the applicant. The instant claim encompasses combinations of ingredients and amounts thereof not disclosed in the instant specification. The argued molar ratios do not remedy this. The instant claims encompass at least ingredient

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limitations such as molecular weights, monomer identity and amount and sequence, polymer morphologies, functionality, solvent type and amount, coloring agent type and amount, all of which are expected to materially affect the instantly claimed properties. The specification does not teach all of the newly encompassed combinations of ingredients and amounts thereof that give the instantly claimed properties, as noted in paragraph 5 below. The newly added material remains new matter. Even if the applicant's argument regarding narrowing is correct, the addition of the new matter is at issue here, not the scope of the claims. A claim can clearly be narrowed overall and yet have new matter in it. The applicant's arguments have been fully considered but are not persuasive for the above reasons. This rebuts the applicant's arguments regarding MPEP 2163.04. The rejection is not conclusory for the above stated reasons. This rejection is therefore maintained.

5. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the disclosed compositions having the properties as required by the instant claim 19, does not reasonably provide enablement for all compositions now encompassed but not enabled and described by the instant specification. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The instant claim 19 encompasses a potentially infinite number of compositions having the claimed properties. The enabling specification does not describe nor give guidance commensurate in scope with *In re Wands* to enable the skilled artisan to make all of the compositions encompassed by the instant claim 19 without undue experimentation.

In re Wands has 8 criteria, (MPEP 2164.01(a)), as shown below.

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(A)The breadth of the claims;

(B)The nature of the invention;

(C)The state of the prior art;

(D)The level of one of ordinary skill;

(E)The level of predictability in the art;

(F)The amount of direction provided by the inventor;

(G)The existence of working examples; and

(H)The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is noted that the instant claims read on an infinite number of compositions (Wands factor A). The specification does not describe how to make all such compositions having the claimed properties which will function as required in the instant invention (Wands factors F, G). It would require an infinite amount of experimentation to determine how to make all of the compositions encompassed by the instant claims (Wands factor H). Chemistry is an unpredictable art (Wands factor E). The ordinary skilled artisan has not imagined nor figured out how to make all of the compositions having the properties of the instant claim 19 yet (Wands factors C, D, E, F, G, and H). The enabling disclosure is not commensurate with the full scope of the claim 19.

See *Sitrick v Dreamworks, LLC* (Fed Cir, 2007-1174, 2/1/2008), particularly

“Before MICHEL, Chief Judge, RADER and MOORE, Circuit Judges.
MOORE, Circuit Judge.

112(1) Enablement - The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation

We review the grant of summary judgment de novo. Liebel-Flarsheim Co. v. Medrad, Inc., 481 F.3d 1371, 1377 (Fed. Cir. 2007). Summary judgment is appropriate “if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c). Whether a claim satisfies the enablement requirement of 35 U.S.C. § 112, ¶ 1 is a question of law, reviewed de novo, based on underlying facts, which are reviewed for clear error. AK Steel Corp. v. Sollac, 344 F.3d 1234, 1238-39 (Fed. Cir. 2003). The evidentiary burden to show facts supporting a conclusion of invalidity is one of clear and convincing evidence because a patent is presumed valid. Id. The “enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation.” Id. at 1244.

112(1) Enablement - The full scope of the claimed invention must be enabled. A patentee who chooses broad claim language must make sure the broad claims are fully enabled.

The full scope of the claimed invention must be enabled. See Auto. Techs. Int’l, Inc. v. BMW of N. Am., Inc., 501 F.3d 1274, 1285 (Fed. Cir. 2007). The rationale for this statutory requirement is straightforward. Enabling the full scope of each claim is “part of the quid pro quo of the patent bargain.” AK Steel, 344 F.3d at 1244. A patentee who chooses broad claim language must make sure the broad claims are fully enabled. “The scope of the claims must be less than or equal to the scope of the enablement” to “ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.” Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc., 166 F.3d 1190, 1195-96 (Fed. Cir. 1999).”

Arguments that the instantly claimed components are narrower in its definition of component (i) than "defined claim 19", which is taken as referencing the claimed components as defined in the instant specification are not persuasive because breadth or narrowness is not a subject of this rejection. It is based on scope of enablement as stated above. MPEP 2173.05(g) is noted. The rejection is not based on any argument that there is something inherently wrong with defining some part of an invention in functional terms. There is no statement in this rejection that functional language in and of itself renders the claims improper. Narrowing of the claims is not the basis of the above rejection nor does it overcome the rejection above, assuming *arguendo* that the instant claim

19 is in fact narrowed relative to the instant specification. The rejection is based on the fact that the instant specification does not adequately teach how to choose the combinations of ingredients and amounts thereof encompassed by the instant claim language so as to give the required properties of the instant claims. There are an infinite number of compositions encompassed by the vast array of broadly recited components, particularly considering acid numbers, degrees of neutralization, molecular weights and other specifics of the claimed components encompassed by the instant claim language and it would require an undue amount of experimentation to determine how to manipulate/choose among all of these parameters to arrive at the claimed compositions and properties because the enabling specification does not give sufficient guidance in how to choose from the infinite list of components encompassed so as to arrive at the required properties of the instant claims. The applicant's arguments do not address the issue of this rejection. There is also no indication that the claims are in fact narrowed though even if they are the instant claims still contain the above stated scope of enablement issue, which is not a matter of breadth of the claims but is one of scope of enablement and sufficiency of the instant disclosure. It is noted that one could choose from the infinite lists of ingredients and arrive at the claimed invention where no properties, such as those of the instant claims are required readily. This situation would therefore be enabled fully though very broad. However, where one must choose from an infinite set of components and arrive at specific properties with little guidance as to how to choose the ingredients from the infinite list thereof that will give the required properties, this situation is not fully enabled though narrower. The above cited case law and Wands factors counter the applicant's arguments regarding MPEP 2163.02. Establishing the criticality of controlling the molar ratio of the unneutralized repeat units to total repeat units for achieving the best storability is not the same as showing how to achieve it for all of

the encompassed compositions. The instant claims are not limited to the parameters of page 15-16, bridging paragraph and page 40, last full paragraph. Furthermore, these sections do not address the other components and ingredient particulars encompassed by the instant claims, which are expected to materially affect the instantly claimed properties. The applicant's arguments do not show that the full scope of the instant claims is enabled by the enabling specification. Possession of the invention claimed at filing is not a subject of this rejection. This rebuts the applicant's arguments regarding MPEP 2163.04. The rejection is not conclusory for the above stated reasons. The argument that the above is flawed because the examiner does not recognize that the "product by product" and functional limitations in the claim narrow the claimed dispersing resin and the claimed molar ratio respectively, i.e., the breadth of the claim (Wands factor A) is narrower than the other claims. This argument is addressed above regarding applicant's prior arguments regarding narrowness of the instant claims. The test argued by the applicant requires consideration of an infinite number of combinations of ingredients and amounts thereof to determine if they possess the the instantly claimed properties. This is undue experimentation because it is impossible to achieve. The instant claims are limited to no particular molar ratio and the applicant has not shown that the molar ratio per se is alone responsible for giving the claimed properties. Arguments above regarding the infinite number of combinations of ingredients, amounts, particulars thereof and their expected effect on the final composition are again noted. Argument of simply repeating the experiment of the instant specification requires doing so for an infinite number of compositions, which is impossible and therefore undue. Applicant's arguments regarding MPEP 2164.06 are rebutted by the above statements and cited case law. For the above reasons, this rejection is maintained.

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6. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. It is unclear what is meant by “carboxylic acid anion acid” of the instant claim 19.

Carboxylic acids are either acid or dissociated to the anion form.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-6, 8-10, and 12-19 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/50365 Yeates et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall

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within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed first and second repeating unit structures of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims. Polymers are a mixture of varying molecules as evidenced by average polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures nor require any specified storage stability. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed repeating unit structures. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claim 19 will be necessarily inherent in the compositions of the

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reference. Applicant's arguments regarding monomers disclosed in the instant specification at page 9 of the latest response are not commensurate in scope with the instant claims, which are not limited to the argued monomers. It is impermissible to read limitations from the specification into the claims and the claims are to be interpreted in their broadest reasonable sense. The argued examples are not commensurate in scope with the instant claims and the cited prior art for the reasons stated above, particularly the lack of definition of what constitutes the claimed repeating unit structures. The continued lack of specifying what constitutes the claimed repeating unit structures allows the prior art polymer molecules to be divided in almost any manner such as to meet the instantly claimed molar requirements. This fact remains unaddressed by the instant claim language. These arguments and facts rebut the applicant's arguments regarding the repeating units and the molar ratios of the instant claims. For the same reasons, the applicant's examples are not commensurate in scope with the instant claims, e.g. the lack of specificity of what constitutes the claimed repeating unit structures. As stated above, the examiner may divide the polymer molecules of the cited prior art in any manner possible that yields the required repeating unit structures and molar ratios. The repeating unit structures need not be monomer units per the instant claim language but may be sequences of monomers for any given repeating unit structure. In terms of storage stability, all such inks must have a sufficient shelf life to go from manufacture to market to end use, which takes much time. The inks of the cited prior art are therefore expected to necessarily have excellent storage stability, though this is clearly a relative term. The applicant has not demonstrated a recognized result for the instant claim limitations related to the claimed repeating unit structures and the claimed molar ratios thereof in a manner commensurate in scope with the instant claims particularly given the lack of

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specificity as to what constitutes the repeating unit structures. This rebuts applicant's arguments relating to MPEP 2144.05(II)(B). There is no probative evidence that the inks of the cited prior art do not inherently have the requirements of the instant claim 19, as noted above. The reasons stated in the scope of enablement rejection above are repeated herein to rebut the applicant's arguments that the functional language of the instant claim 19 makes it commensurate in scope with the evidence in the instant specification. For the above stated reasons, particularly those relating to the lack of definition of the instantly claimed repeating unit structures, the comparative examples of the instant specification are not closer comparisons than the cited prior art. The evidence that claim 19 is not commensurate in scope with the evidence of record is a prima facie consideration of the scope of the claims versus the scope of the evidence of record. They simply are not equal in scope when compared side by side. This is a purely quantitative analysis and in no way is it "conclusory". See the above rationales relating to this issue and particularly note the above discussions relating to the instant claims' lack of specification of what is encompassed by the claimed repeating unit structures. Given the lack of clarity of the molar ratio of carboxylic acid groups to carboxylic acid anion acid and carboxylate groups, it is not seen that partial neutralization or the equilibria of carboxylic acid and weak base does not necessarily give the instantly claimed molar ratio of the instant claim 19. It is expected that partial neutralization or even complete neutralization of COOH with weak base will give the instantly claimed amount of carboxylic acid groups falling within the scope of the broad range of the instant claim 19 based on the equilibria of such neutralization as well as the indefiniteness of "carboxylic acid anion acid".

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

10. Claims 1-6, 8-10, and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/50365 Yeates et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed structures I and II of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims. Polymers are a mixture of varying molecules as evidenced by average polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the above discussed combinations of ingredients and amounts thereof because they are encompassed by the reference and would have been expected to give the

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printing properties described by Yeates. There are no unexpected results seen which are demonstrated in a manner commensurate in scope with the instant claims and the cited prior art. The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed units. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claim 19 will be necessarily inherent in the compositions of the reference.

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures nor require any specified storage stability. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if

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unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed repeating unit structures. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claim 19 will be necessarily inherent in the compositions of the reference. Applicant's arguments regarding monomers disclosed in the instant specification at page 9 of the latest response are not commensurate in scope with the instant claims, which are not limited to the argued monomers. It is impermissible to read limitations from the specification into the claims and the claims are to be interpreted in their broadest reasonable sense. The argued examples are not commensurate in scope with the instant claims and the cited prior art for the reasons stated above, particularly the lack of definition of what constitutes the claimed repeating unit structures. The continued lack of specifying what constitutes the claimed repeating unit structures allows the prior art polymer molecules to be divided in almost any manner such as to meet the instantly claimed molar requirements. This fact remains unaddressed by the instant claim language. These arguments and facts rebut the applicant's arguments regarding the repeating units and the molar ratios of the instant claims. For the same reasons, the applicant's examples are not commensurate in scope with the instant claims, e.g. the lack of specificity of what constitutes the claimed repeating unit structures. As stated above, the examiner may divide the polymer molecules of the cited prior art in any manner possible that

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yields the required repeating unit structures and molar ratios. The repeating unit structures need not be monomer units per the instant claim language but may be sequences of monomers for any given repeating unit structure. In terms of storage stability, all such inks must have a sufficient shelf life to go from manufacture to market to end use, which takes much time. The inks of the cited prior art are therefore expected to necessarily have excellent storage stability, though this is clearly a relative term. The applicant has not demonstrated a recognized result for the instant claim limitations related to the claimed repeating unit structures and the claimed molar ratios thereof in a manner commensurate in scope with the instant claims particularly given the lack of specificity as to what constitutes the repeating unit structures. This rebuts applicant's arguments relating to MPEP 2144.05(II)(B). There is no probative evidence that the inks of the cited prior art do not inherently have the requirements of the instant claim 19, as noted above. The reasons stated in the scope of enablement rejection above are repeated herein to rebut the applicant's arguments that the functional language of the instant claim 19 makes it commensurate in scope with the evidence in the instant specification. For the above stated reasons, particularly those relating to the lack of definition of the instantly claimed repeating unit structures, the comparative examples of the instant specification are not closer comparisons than the cited prior art. The evidence that claim 19 is not commensurate in scope with the evidence of record is a prima facie consideration of the scope of the claims versus the scope of the evidence of record. They simply are not equal in scope when compared side by side. This is a purely quantitative analysis and in no way is it "conclusory". See the above rationales relating to this issue and particularly note the above discussions relating to the instant claims' lack of specification of what is encompassed by the claimed repeating unit structures. Given the lack of clarity of the molar

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ratio of carboxylic acid groups to carboxylic acid anion acid and carboxylate groups, it is not seen that partial neutralization or the equilibria of carboxylic acid and weak base does not necessarily give the instantly claimed molar ratio of the instant claim 19. It is expected that partial neutralization or even complete neutralization of COOH with weak base will give the instantly claimed amount of carboxylic acid groups falling within the scope of the broad range of the instant claim 19 based on the equilibria of such neutralization as well as the indefiniteness of "carboxylic acid anion acid".

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

11. Claims 1-10 and 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/50365 Yeates et al. in view of EP 0899311 A1 Yamazaki et al..

Yeates discloses the instantly claimed compositions at the abstract; page 1, lines 1-36, particularly 23-29; page 2, lines 1-38, particularly 5-21, of which the partial neutralization gives the instantly claimed structures I and II; page 3, lines 1-37, particularly 1-10; page 6, lines 1-39, particularly 19-24; page 7, lines 1-39, particularly 15-31, more particularly lines 17-18, which fall within the scope of the instant claim 4, lines 23-24 of which the polyalkylene glycols fall within the scope of the instant claim 3, and line 28, which falls within the scope of the instant claim 2; page 9, lines 4-19, particularly 14-19, where the buffers that give the alkaline pHs fall within the scope of the instant claims 13-14; and the remainder of the document. Given the lack of specificity of the claimed structures I and II of the instant claims, the polymers of the reference can be divided into any structures desired so as to meet the limitations of the instant claims 5-6 and 11-12. Polymers are a mixture of varying molecules as evidenced by average

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polymer concepts such as molecular weight, functionality, and monomer distribution. Since the instant claims 15-16 do not specify the polymers of these claims, some portion of the polyacrylate of the reference may be taken that meets the limitations of these claims. The ink jet printed and resulted printed substrate of the reference meet the instant claims 17-18.

It would have been obvious to one of ordinary skill in the art at the time of the instantly claimed invention to use the above discussed combinations of ingredients and amounts thereof because they are encompassed by the reference and would have been expected to give the printing properties described by Yeates and to use carbon black of the instant claim 7 therein because carbon black is encompassed by the broadly claimed "colorant" of the claims of Yeates, e.g. claim 1, and is shown by Yamazaki to be a conventional black colorant for acrylic based ink jet inks which is expected to contribute its well known colorant properties to the inks of Yeates.

There are no unexpected results seen which are demonstrated in a manner commensurate in scope with the instant claims and the cited prior art.

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of

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definition of the instant claims as to what constitutes the claimed units. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts.

Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claim 19 will be necessarily inherent in the compositions of the reference.

The applicant's argument that the instantly claimed composition gives high storage stability is not supported for the full scope of the instant claims which do not define the instantly claimed first and second repeating structures nor require any specified storage stability. As such any of the repeating structures of the reference can be defined so as to meet the instantly claimed amounts. It is noted that the instant claim 1 does not have the same requirement of the instant claim 19 that the first repeating unit structure be carboxyl. As such any structure, even if unneutralizable, reads on the instantly claimed first repeating unit structure. The applicant's arguments are therefore not commensurate in scope with the instant claims and the cited prior art. "Partially neutralized" of page 2, line 17 of the reference will fall within the instantly claimed broad range of amounts because of the lack of definition of the instant claims as to what constitutes the claimed repeating unit structures. As such, the polymer of the reference can necessarily be divided into units that meet the instantly claimed amounts. Given the similarity or sameness of the polymer of the reference, as discussed above, it is expected that the instantly claimed properties of the instant claim 19 will be necessarily inherent in the compositions of the reference. Applicant's arguments regarding monomers disclosed in the instant specification at page 9 of the latest response are not commensurate in scope with the instant claims, which are not limited to the argued monomers. It is impermissible to read limitations from the

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specification into the claims and the claims are to be interpreted in their broadest reasonable sense. The argued examples are not commensurate in scope with the instant claims and the cited prior art for the reasons stated above, particularly the lack of definition of what constitutes the claimed repeating unit structures. The continued lack of specifying what constitutes the claimed repeating unit structures allows the prior art polymer molecules to be divided in almost any manner such as to meet the instantly claimed molar requirements. This fact remains unaddressed by the instant claim language. These arguments and facts rebut the applicant's arguments regarding the repeating units and the molar ratios of the instant claims. For the same reasons, the applicant's examples are not commensurate in scope with the instant claims, e.g. the lack of specificity of what constitutes the claimed repeating unit structures. As stated above, the examiner may divide the polymer molecules of the cited prior art in any manner possible that yields the required repeating unit structures and molar ratios. The repeating unit structures need not be monomer units per the instant claim language but may be sequences of monomers for any given repeating unit structure. In terms of storage stability, all such inks must have a sufficient shelf life to go from manufacture to market to end use, which takes much time. The inks of the cited prior art are therefore expected to necessarily have excellent storage stability, though this is clearly a relative term. The applicant has not demonstrated a recognized result for the instant claim limitations related to the claimed repeating unit structures and the claimed molar ratios thereof in a manner commensurate in scope with the instant claims particularly given the lack of specificity as to what constitutes the repeating unit structures. This rebuts applicant's arguments relating to MPEP 2144.05(II)(B). There is no probative evidence that the inks of the cited prior art do not inherently have the requirements of the instant claim 19, as noted above. The reasons

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stated in the scope of enablement rejection above are repeated herein to rebut the applicant's arguments that the functional language of the instant claim 19 makes it commensurate in scope with the evidence in the instant specification. For the above stated reasons, particularly those relating to the lack of definition of the instantly claimed repeating unit structures, the comparative examples of the instant specification are not closer comparisons that the cited prior art. The evidence that claim 19 is not commensurate in scope with the evidence of record is a prima facie consideration of the scope of the claims verses the scope of the evidence of record. They simply are not equal in scope when compared side by side. This is a purely quantitative analysis and in no way is it "conclusory". See the above rationales relating to this issue and particularly note the above discussions relating to the instant claims' lack of specification of what is encompassed by the claimed repeating unit structures. Given the lack of clarity of the molar ratio of carboxylic acid groups to carboxylic acid anion acid and carboxylate groups, it is not seen that partial neutralization or the equilibria of carboxylic acid and weak base does not necessarily give the instantly claimed molar ratio of the instant claim 19. It is expected that partial neutralization or even complete neutralization of COOH with weak base will give the instantly claimed amount of carboxylic acid groups falling within the scope of the broad range of the instant claim 19 based on the equilibria of such neutralization as well as the indefiniteness of "carboxylic acid anion acid".

The applicant's arguments have been fully considered but are not persuasive for the reasons stated above and the teachings of the cited prior art. This rejection is therefore maintained.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Friday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Patrick D Niland/
Primary Examiner
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